Direction: Find the inverse of each function, and state its domain and range. Show all your work in the space provided.

1) \( f(x) = \sqrt{x + 1}, \ x \geq 0 \)

2) \( f(x) = -\sqrt{x - 1}, \ x \geq 0 \)

3) \( f(x) = -\sqrt{4-x^2}, \ 0 \leq x \leq 2 \)
Direction: Find the inverse of each function, and state its domain and range. Show all your work in the space provided.

1) \( f(x) = \sqrt{x} + 1, \ x \geq 0 \)

\[ f^{-1}(x) = x^2 - 2x + 1; \ \text{Domain: } x \geq 1, \ \text{Range: } y \geq 0 \]

2) \( f(x) = -\sqrt{x} - 1, \ x \geq 0 \)

\[ f^{-1}(x) = x^2 + 2x + 1; \ \text{Domain: } x \leq -1, \ \text{Range: } y \geq 0 \]

3) \( f(x) = -\sqrt{4-x^2}, \ 0 \leq x \leq 2 \)

\[ f^{-1}(x) = \sqrt{4-x^2}; \ \text{Domain: } -2 \leq x \leq 0, \ \text{Range: } 0 \leq y \leq 2 \]